

SEQUENCE LISTING**(1) GENERAL INFORMATION****APPLICANTS:**

(A) NAME: Advanced Technologies (Cambridge) Limited
 (B) STREET: Globe House, 1 Water Street
 (C) CITY: London
 (E) COUNTRY: England
 (F) POSTAL CODE: WC2R 3LA

(ii) TITLE OF INVENTION:

Modification of Plant Fibres

(iii) NUMBER OF SEQUENCES:

8

(iv) CORRESPONDENCE ADDRESS:

(A) ADDRESSEE: British American Tobacco (Investments) Limited
 (B) STREET: Regents Park Road
 (C) CITY: Southampton
 (D) STATE: Hampshire
 (E) COUNTRY: England
 (F) POSTAL CODE: SO15 8TL

(v) COMPUTER READABLE FORM:

(A) MEDIUM TYPE: Diskette 3.50 inch
 (B) COMPUTER: Viglen P5/75
 (C) OPERATING SYSTEM: MS-DOS Windows 95
 (D) SOFTWARE: Microsoft Word 97

(vi) CURRENT APPLICATION DATA:

(A) APPLICATION NUMBER: Not yet known
 (C) CLASSIFICATION: Not yet known

(viii) ATTORNEY/AGENT INFORMATION:

(A) NAME: Mrs. M.R. Walford/ Mr. K.J.H. MacLean
 (C) REFERENCE: RD-ATC-19

(ix) TELECOMMUNICATION INFORMATION:

(A) TELEPHONE: 01703 777155
 (B) TELEFAX: 01703 779856

(2) INFORMATION FOR SEQ.ID. NO:1

(i) SEQUENCE CHARACTERISTICS

(A) LENGTH: 488 bps
 (B) TYPE: Nucleic acid
 (C) STRANDEDNESS: Double
 (D) TOPOLOGY: Linear

(ii) MOLECULE TYPE:

cDNA

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Eucalyptus grandis

(xi) SEQUENCE DESCRIPTION: SEQ. ID. NO:1:

ATGGGGGGGG CTTGTGGGTA TGGCAACCTG TACAGCCAAG GCTATGGCAC	50
CAACACTGCA GCTTTGAGCA CTGCCCTGTT CAACAATGGC CTGAGCTGCG	100
GGGCATGTGA CGAGATGCGG TGCAACGACG ACCCCAGGIG GTGCCCTCCCG	150
GGGACCATCA TGGTCACGGC AACCAACTTT TGCCCTCCCA ACTTGGCCCT	200
CTCCAACGAC AATTGCGGCT GGTGCAACCC CCCTCTCCAG CACTTCGATA	250
TGGCCGAGCC TGCTTCTTG CAGATTGCC AGTACAAAGC TGGGATTGTC	300
CAGGTTTCCT TCAGAAGGGT TCCGTGTGIG AAGAAAGGAG GGGTAAGGTT	350
CACCATCAAT GGGCACTCCT ACTTCAACTT GGTGCTGATC ACCAACGTGG	400
GAGGTGCTGG TGATGTCCAT TCCGTTCCA TCAAGGGCIC GAGGACTGGT	450
TGGCAAGCCA TGTCAAGGAA CTGGGGAAA AACTGGCA	488

(2) **INFORMATION FOR SEQ. ID. NO:2**
SEQUENCE CHARACTERISTICS:

(A) LENGTH: 475 base pairs
 (B) TYPE: Nucleic acid
 (C) STRANDEDNESS: Double
 (D) TOPOLOGY: Linear

(ii) **MOLECULE TYPE:** cDNA

(vi) **ORIGINAL SOURCE:**
 (A) ORGANISM: Eucalyptus grandis

(xi) **SEQUENCE DESCRIPTION:** SEQ. ID. NO:2:

ATGGGGGGGG CATGCGGGTA TGGCAACCTG' TACAGCCAAG GCTATGGCAC	50
CAACACTGCA GCTTTGAGCA CTGCCCTGTT CAACAATGGC CTGAGCTGCG	100
GGGCATGTTA CGAGATGCGG TGCAACGACG ACCCCAGGIG GTGCCCTCCCG	150
GGGACCATCA TGGTCACGGC AACCAACTTT TGCCCTCCCA ACTGGCCCT	200
CTCCAACGAC AATGGGGCT GGTCACACCC CCCTCTCCAG CACTCGATA	250
TGGCCGAGCC TGCTTCTTG CAGATTGCC AGTACAAAGC TGGGATTGTC	300
CGGGTTTCCCT TCAGAAAGGGT TCCGTGIGIG AAGAAAGGAG GGGTAAGGTT	350
CACCATCAAT GGGCACTCCT ACTTCAGCTG TGGTGCTGAT CACCAACGTG	400
GGAGGTGCIG GTGATGTCCA TTCCGTTCC ATCAAGAGCT CGAGGACTGG	450
TTGGCAAGCC ATGTCAGGA ATTGA	475

(2) **INFORMATION FOR SEQ. ID. NO:3**
SEQUENCE CHARACTERISTICS:

(A) LENGTH: 494 base pairs
 (B) TYPE: Nucleic acid
 (C) STRANDEDNESS: Double
 (D) TOPOLOGY: Linear

(ii) **MOLECULE TYPE:**

cDNA

(vi) **ORIGINAL SOURCE:**

(A) ORGANISM: Euclayptus grandis

(xi) **SEQUENCE DESCRIPTION:**

SEQ. ID. NO:3:

ATGGGGGGGG CATGIGGTTA CGGGGACCTT CACAGGGCCA CCTATGGCAA 50
 GTACAGTGCC GGCTTGAGCT CGATGCTGTT CAACAGAGGG AGTACCTGCG 100
 GGGCTTGCTT CGAGCTCCGG TGCGTGACCC ACATTTTGIG GTGCCCTCCCT 150
 GGTAGCCCGT CGGIGATCCT CACCGCCACC GACTTCTGCC CTGGAACTA 200
 CGGGCTCGCG GCAGATTACG GCGGGTGGTG CAACTTCCCG CAGGAGCACT 250
 TCGAGATGTC GGAGGCGGCC TTGCGGAGA TTGCGGTGCG AAGGGCTGAT 300
 GGGGTGCCTA TCCAGTACAG GAGGGTGAAC TGTCTGAGAA GCGGIGGCT 350
 GAGATTACA TTGAGCGGAA ACTCTCACCT CTTCAGGIC TGGTGACGA 400
 ATGTAGGCCT AGATGGGGAG GTGATTGCCA TGAAAATGAA GGATCGAAA 450
 ACAGGGTGGA TACCGATGGC AAGAAACTGG GGCAAAAACG GGCA 494

(2) INFORMATION FOR SEQ. ID. NO:4

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 437 base pairs
 (B) TYPE: Nucleic acid
 (C) STRANDEDNESS: Double
 (D) TOPOLOGY: Linear

(ii) MOLECULE TYPE:

cDNA

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Eucalyptus grandis

(xi) SEQUENCE DESCRIPTION:

SEQ. ID. No. 4

ATGGGTGCC ACCGGGTCT TGATCCCTTG ATGGCCACGG AGTGCACATC	50
CCCTGCTCCG CGGACATTGG TTATGAGGAC GAGGTTGAAA TAAGAATGGC	100
CGTTGACGGT GAACCGGATC CCTCCGCTTC TCCCTGCACCT CACTCTTGG	150
TAGGCCACCG GGACGGATCCC GGCCCTGTAC TGCGCAATGT GCTGGAAGAC	200
CGGCTGGGAG AGGTCGAAAT GGAGTTGAGG AGGGTGCAC CACCCCTCTG	250
GAGGGCAGAA GTTGGTGCCT GTGACCAACAA TGGGGGCCCG GAGGCACAC	300
TGGGGGTCTT TCAACGCACCG GAGCTCAAAG CACGGCGCGC AGCTCAGCCC	350
ATTGTTGAAC AATGCAGTGC TCAGTGCAGC TGTGTTGIG CGGTACCCCTT	400
GGCTGTATAG ATTCCCATAA CCACACGCCG CCCCCCAT	437

(2) INFORMATION FOR SEQ. ID. NO:5

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH:

437 base pairs

(B) TYPE

Nucleic acid

(C) STRANDEDNESS:

Double

(D) TOPOLOGY:

Linear

(ii) MOLECULE TYPE:

cDNA

(vi) ORIGINAL SOURCE:

(A) ORGANISM:

Eucalyptus grandis

(xi) SEQUENCE DESCRIPTION:

SEQ. ID. No. 5

ATGGGTTGCC ACCGGGTCT TGATCCTTGT ATGGCCACGG AGGCCACATC	50
CCCTGCTCGG CGGACATTTGG TTATGAGCAC GAGGTTGAAA TAAGAATGGC	100
CGTTGACGGT GAACCGGATC CCTCGCTTC TCCCTGCACCT CACTCTTGG	150
TAGGCCACAG GGACGATCCC GGCCCTGTAC TGGCGAAATGT GCTGGAAGAC	200
AGGCTGGGAG AGGTCGAAAT GGAGTTGAGG AGGGTGGCAC CACCCCTCTG	250
GAGGGCAGAA GTTGGTCGCC GTGACAACAA TGGCGCCCGG GAGGCACCAC	300
TGGGGGTGTT TCAAGCACCG GAGCTCAAAG CACGGGCCGG AGCTCAGCCC	350
ATTGTTGAAC AATGCAGTGC TCAGTGCAGC TGTGTTTGTG CGTACCCCTT	400
GGCTGTATAG ATTCCATAA CCACACGCCG CCCCCAT	437

(2) INFORMATION FOR SEQ. ID. NO:6

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 488 base pairs
- (B) TYPE: Nucleic acid
- (C) STRANDEDNESS: Double
- (D) TOPOLOGY: Linear

(ii) MOLECULE TYPE:

cDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Eucalyptus grandis

(xi) SEQUENCE DESCRIPTION:

SEQ. ID. No. 6

CCTTGACATG	GTC	TGCCACC	T	TGTCGGCA	ACCC	TCA	CG	GGACCGAGT	50
TGACGTTGCC	TG	GGCGCGCCG	ACG	TG	TG	CGAGGACGAG	CT	TGAAGTAT	100
GAGTTGCCGT	TG	ATGGTGAA	CGG	ATGCCT	CT	CTCCTCC	TG	CACGT	150
CCTCCTGTAC	GCA	ACGTGGA	CGA	TGCCGGC	TC	GGTACTTG	GCA	ATGTGCT	200
GGAAGACGGG	CT	GGGAGATG	TCGAAGTGGT	GT	GGGGCGG	GT	GGCACCAT	250	
CGCGCGGCGT	TG	TTGGGAG	GGCGTGT	TT	GGGGCAGA	AG	TTGTGGC	300	
GGTGACGACG	AT	GGGCGGC	CCAGGCACCA	CT	TCGTC	TTC	AGCACC	350	
GGATCTCGAA	CC	ACGACCCC	CAGCTAGCC	CG	TTTTTAA	CAG	GGCGGTG	400	
CTCAGCGCG	CG	CGTGTGCGT	ACCGTAGCCC	TG	GCTGTACA	GG	TGCG	448	

(2) INFORMATION FOR SEQ. ID. NO:7

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH:
- (B) TYPE
- (C) STRANDEDNESS:
- (D) TOPOLOGY:

19 nucleotides
Nucleic acid
Single
Linear

(ii) MOLECULE TYPE:

Synthetic DNA

(xi) SEQUENCE DESCRIPTION:

SEQ. ID. No. 7

ATGGIGGGIGC NTGIGGNTA

19

Key I = Inosine

N = A, G, T, or C

(2) INFORMATION FOR SEQ. ID. NO:8

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH:
- (B) TYPE
- (C) STRANDEDNESS:
- (D) TOPOLOGY:

20 nucleotides
Nucleic acid
Single
Linear

(ii) MOLECULE TYPE:

Synthetic DNA

(xi) SEQUENCE DESCRIPTION:

SEQ. ID. No. 8

TGCCARTTYT GNCCCCARTT

20

Key R = A or G

Y = T or C

N = A, G, T or C